WebSphere® WebSphere Dashboard Framework

IBM

Version 6.0
for Windows 2000 and Windows XP

Installation Guide

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> **Note**
> Before using this information and the product it supports, read the information in "Notices," on page 17.

First Edition (March 2007)

This edition applies to version 6.0 of IBM WebSphere Dashboard Framework (product number L-JNEN-6QKLT6) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. WebSphere Dashboard Framework installation

Follow this information to install or uninstall IBM® WebSphere® Dashboard Framework.

This product operates as a plug-in to Eclipse-based Integrated Development Environments (IDEs). If you do not have one of the following supported IDEs, the installation program will provide Eclipse 3.2:

- IBM Rational Application Developer 6
- IBM Rational Software Architect
- IBM Rational Web Developer
- Eclipse 3.1 or 3.2

Prior to installation you must install WebSphere Portal or one of the supported application servers. Refer to the WebSphere Dashboard Framework Information Center for more information about supported platforms.

Software requirements

This topic explains the software requirements for installing and using IBM WebSphere Portlet Factory and IBM WebSphere Dashboard Framework.

Integrated Development Environments (IDEs)

Developing applications with Portlet Factory and WebSphere Dashboard Framework requires one of the following IDEs, running on Microsoft® Windows® 2000 or Windows XP. If you do not already have an IDE installed, you can opt to install Eclipse 3.2.1 during installation.

- IBM Rational® Application Developer 6 and 7
- IBM Rational Software Architect
- IBM Rational Web Developer
- Eclipse 3.1 and 3.2 (SDK versions only)

JDK support

Portlet Factory and WebSphere Dashboard Framework support the following Java 2 SDKs:

- Standard Edition v1.4.1, 1.4.2

Application servers

Before installing Portlet Factory or WebSphere Dashboard Framework, you must have a Portal server installed and prepared for testing and deploying applications. In a development environment, the server may reside on your development machine. In a production environment, the server is usually a remote machine.

For development or production use:

- IBM WebSphere Application Server 5.1, 6.0, and 6.1 (installed with IBM WebSphere Portal)
- WebSphere Portal 5.1, 5.1.0.2, and 6.0.0.0

- JSR-168 Portal Servers

  Note: IBM provides no explicit support for specific JSR-168 portal containers other than those included with WebSphere Portal.

For development use only:
- Apache Tomcat Server 5.5.x

Server operating systems

Portlet Factory and WebSphere Dashboard Framework applications can be deployed on application servers running the following operating systems.

IBM AIX®
- AIX 5.3

Linux®
- SUSE Linux 9.x
- Red Hat Enterprise Linux AS release 4

Sun Solaris
- Solaris 10 (latest patch level required)

Microsoft Windows
- Windows Server 2000, 2003 (Enterprise or Advanced)
- Windows 2000 Advanced Server SP4
- Windows Advanced Server 2003

Databases

The following databases can be set up for Portlet Factory and WebSphere Dashboard Framework applications that use relational databases to store data.

DB2®
- DB2 Enterprise Edition 8.1
- DB2 Enterprise Edition 7.2 (FixPack 7 required with db2java.zip)

Oracle
- Oracle 10g
- Oracle 9i Release 2 v9.2.0.1.0
- Oracle 8i Enterprise Release 3 v8.1.7 (requires thin driver for 8.1.7 or classes12.zip)

Microsoft SQL Server
- MS SQL Server 2000 (requires msbase.jar, mssqlserver.jar, and msutil.jar)

External business software extensions

The following software is required for Portlet Factory and WebSphere Dashboard Framework applications that use Integration Extensions to connect with these back-end systems.

- IBM Lotus® Domino® v 5.x, 6.0, 6.5, and 7.0 (requires version 6 or later NCSO.jar)
- PeopleSoft 8.x or later, as long as it supports access to Component Interfaces through the PSJOA.jar file (requires PSJOA.jar)
- SAP
  - SAP R3 v3.1h or later (requires SAPCO.jar)
  - SAP BW
- Siebel
  - Siebel 7.5.2, 7.5.3 (requires SiebelJI.jar, SiebelJI_Common.jar, and SiebelJI_enu.jar files)
  - Siebel 7.8 (requires Siebel.jar and SiebelJI_enu.jar files)

Client requirements

Clients can use Portlet Factory and WebSphere Dashboard Framework applications with the following browsers.
- Microsoft Internet Explorer 6.0
- Mozilla Firefox 1.5.0.1
- Netscape Communicator 8.x

Chapter 2. Installing and configuring WebSphere Dashboard Framework

This section describes how to run the installation program and configure your server to support dashboard applications.

Follow these steps to install and configure IBM WebSphere Dashboard Framework.

Running the installation program

This topic describes how to run the install program to set up your development environment.

Follow these steps to install Portlet Factory Designer and IBM WebSphere Dashboard Framework.

1. Launch the installation program (install.bat).
2. In the Language Selection screen, select the language used to display the license text. Click **OK**.
3. Review the Introduction screen, quit any open programs running on the system, and click Next.
4. In the License Agreement screen, read the End User License Agreement, select "I accept the terms of the License Agreement" to proceed with installation. Click **Next**.

   Note: If you do not accept the license terms, you will be prompted to Quit the installation.
5. In the Choose Install Location screen, specify the location where the WebSphere Dashboard Framework files will be located. The default is C:\Program Files\IBM\WebSphere Portlet Factory. Click **Next**.
6. In the Specify Install Items screen, select an installation choice and click **Next**. You can choose one of the following options:
   - **Into existing IBM Rational Application Developer** - Select this option if you want to continue to use the Rational Development Environment. The installation program will add menu items specific to the current version of your Rational Development Environment.
   - **Into existing Eclipse** - Select this option if you want to continue to use the version of the Eclipse-based IDE already installed. The installation program adds menu items specific to the current version of your Eclipse IDE. If you are upgrading, see the note at the end of this topic about upgrading Designer plug-in files.
   - **And Eclipse** - Select this option if you do not have an IDE. If this option is selected, the installation program installs Eclipse as the IDE when it installs WebSphere Dashboard Framework. This option is only visible if there is an eclipse.zip file in the same directory as the install program.
7. In the Specify IDE screen, specify the IDE location. Click **Next**.
8. Review the Pre-Installation Summary screen. If all information is correct, click **Install**.

   Alternately, use the Previous button to return to a screen and change a selection.

9. An Install progress screen is displayed and, once installation is complete, the Install Complete screen is displayed. Click **Done** to close the install program.

   An install log is created in the install location.

If you have upgraded into an existing Eclipse-based installation, you must update Designer plug-in files. See "Upgrading plug-in files after installation" for more information.

Configuring an embedded test server environment

Installing in an embedded test server environment requires a few additional procedures and steps after installation.

If you are installing on IBM Rational Development Environment Studio Application Developer in an embedded test environment (application server or portal server), complete the following procedures.

Turning off validation

Validating all the HTML and XML files in a project can take a long time. You may want to turn validation off before refreshing your project. This procedure applies to all projects in the workspace. To disable validation for WebSphere Dashboard Framework projects only, disable the settings listed below.

Follow these steps to turn off validation.
1. In Rational Developer, select **Window** ▸ **Preferences**.
2. Select Validation and click the Deselect all button.
3. Click **Apply**.
4. In the left pane, select: **Web Tools** ▸ **Links** ▸ **Validation** ▸ **Refactoring**.
5. De-select the Enable LinksBuilder check box.
6. Click **Apply**.
7. Click **OK** to close the Preferences window.

Configuring the test server

This step publishes the application and starts the test server.
1. Right-click the Web application project and select **Run on Server**.
2. Select the WebSphere Application Server version and configuration desired, then click **OK**. If you have not specified a server configuration, the default WebSphere Application Server server configuration can be used.

   Note: Attaching to a remote server has not been tested.

Modifying the method compiler classPath setting

In order to use builders that utilize code in third-party JAR files, you may need to change the bowstreet.methods.classPath property in your cluster.properties file.

Follow these steps to change the classPath property
1. Using a text editor, open the *project_name*/ WebContent /WEB-INF/config/ cluster.properties file.
2. Find the property called bowstreet.methods.classPath.

3. Append the path to the appropriate j2ee.jar file to this property's value.

   For example, to use the j2ee12.jar file that ships with Portlet Factory, use the following as the value to append to this property: ${ bowstreet.rootDirectory} / clientLibs /j2ee12.jar . (This file is stored in: bowstreet_root_directory /WEB-INF/ clientlibs)

4. Save and close the cluster.properties file.

5. Restart Rational Application Developer to apply the changes to this property.

Opening and running a model

After you have completed all the preceding steps, you can start using Portlet Factory to run applications on the embedded test server.

1. Double-click a model in the WebContent\WEB-INF\models directory to open the model in Portlet Factory Designer.

2. Choose **Run** → **Run Last Launched** or click the "Run" icon in the toolbar to run the model.

When you run a model, the embedded server you configured is used.

Configuring your environment after installation

Take additional steps to configure your environment after installing IBM WebSphere Dashboard Framework.

Follow the steps that are appropriate for configuring your server platform.

IBM WebSphere Portal

The following additional configurations are required for WebSphere Portal.

1. Configure Heap Size -- By default, WebSphere Portal 6 sets 512 MB as the maximum allowed size for the heap. This maximum should be raised to 1 GB. If you are using WebSphere Portal 5.x, raise the heap size to 400 MB. Use the WebSphere Administrative console to set the heap size. For more information on configuring the heap size, see the WebSphere Administrative Console Help.

2. Update the Cookie Path - The default settings on the WebSphere Portal do not include the WebSphere Dashboard Framework root directory in the cookie path. If you are using a development configuration on WebSphere Portal, the root directory must be added to the cookie path in order to save your session information.

   You may experience problems with refresh and caching of Web pages before you update the cookie path. You will not be able to successfully complete the tutorials without changing the cookie path. Use the WebSphere Administrative console to replace "/ wps " with "/" in your cookie path.

3. (WebSphere Portal 5.1 only) Add " pbportlet.jar " File -- This file is needed only if you plan to build portlets based on the deprecated IBM Portlet API, rather than the Java Standard API (recommended). This JAR file, included in previous versions of WebSphere Portal, is not provided with version 5.1 As a result, you must procure this file and add it to your system. If you have access to a 5.0 version of WebSphere Portal, you can find this file at: WebSphere\PortalServer\ pb\lib. Alternately, you can get a copy of this file from IBM Customer Support.

   The default web.xml used to create Factory Portlet WARs includes a reference to the WebSphere C2A Portlet wrapper (com.ibm.wps.pb.wrapper.PortletWrapper). As a result, all Portlet WARs must

include the appropriate version of pbportlet.jar. When developing against WebSphere Portal 5.1 server, you must manually specify the location of the directory that contains the pbportlet.jar file.

Once you acquire the pbportlet.jar file, place it in an accessible directory on the system on which you are installing WebSphere Portal 5.1.

Create a project and, when the WebSphere Portlet Settings page is displayed, use the PB Portlet Jar Location input widget and browse to the location of the pbportlet.jar file. Then select the file and complete project creation.

After you select this file the first time, it will be automatically included in the portlet WAR created by WebSphere Dashboard Framework.

WebSphere 5.x Application Server

In a WebSphere Application Server 5 environment, you must set the class load order on the WebApp project so that the class loader for the Factory application context looks at the JARs in the project's WebContent/WEB-INF/lib before looking at those shipped with WebSphere Portal. This ensures that latest versions of third-party JAR files are correctly picked up.

Follow these steps to set the class load order.
1. In the WebSphere Application Server administrative console, go to **Applications** → **Enterprise Applications** .
2. Click the enterprise application name for your WebSphere Dashboard Framework installation (for example, "dashboard_framework") to display a list of properties for the application.
3. In the Related Items list of the Configuration Tab, click the Web Modules link.
4. Click the wpf.war file, displaying the General Properties for the WPF WAR file.
5. Change the Class loader Mode to " PARENT_LAST " and click OK.
6. Save the changes to your local configuration.
7. Restart the server.

Apache Tomcat

After creating a new IBM WebSphere Portlet Factory project, restart Tomcat. This ensures that all libraries are loaded correctly.

Setting up native language support

To set up a language other than English, install the Eclipse language pack.

WebSphere Dashboard Framework supports Group 1 languages, namely German, Spanish, French, Italian, Japanese, Korean, Portuguese (Brazil), Traditional Chinese, and Simplified Chinese. To use a language other than English, you must download a language pack from the Eclipse Web site and install that pack into your Eclipse IDE.

Follow these steps to enable language support.
1. Verify that Microsoft Windows is configured to use a non-English, Group 1, language.
2. Exit Portlet Factory Designer.
3. Access the Eclipse.org Web site home page and navigate to: Downloads | All Versions | 3.2 Language Packs.

4. In the Language Packs: 3.2 screen, download the NL-1 pack zip files for the Microsoft Windows platform. (Two zip files are required.)
5. Extract these zip files into your Eclipse installation, making sure to do so at the correct directory level.
6. Start Portlet Factory Designer.

   Eclipse runs in the language configured on the Windows machine.

   Note: You can force Eclipse to run in another language by adding a language identifier to the Eclipse startup command. For example, by adding: -Duser.language=es -Duser.country=ES to the startup command, you can run Eclipse in Spanish, regardless of the language the system is configured to use.

Chapter 3. Creating a project after installation

Run IBM WebSphere Portlet Factory Designer to access WebSphere Dashboard Framework features.

To complete configuration tasks for WebSphere Dashboard Framework, you will need to create a project first.

1. Start Designer by choosing **Start** → **Programs** → **IBM WebSphere** → **Portlet Factory** → **Designer**.
2. When starting up Rational Development Environment Studio, you are prompted for a workspace location.

   If you will be running applications on your local machine (which is called an embedded test server environment), specify a workspace location close to the root directory to prevent path and file names from exceeding the 256-character limit imposed by Microsoft Windows; for example, c:\factory\my_projects\.
3. Open the WebSphere Dashboard Framework *Getting Started Guide* by **Start** → **Programs** → **IBM WebSphere** → **Dashboard Framework** → **Getting Started Guide**. You need Adobe Acrobat Reader to open this PDF file.
4. Follow the instructions in the *Getting Started Guide* for creating a project.

   This information is also available in the Getting Started section of Help.

Using Help

WebSphere Dashboard Framework and Portlet Factory both come with Eclipse-based Help, which you can open from the Help menu of your IDE. Help is also available by pressing F1 or clicking the Help button from dialog boxes and development windows. To find additional documentation on the IBM Web site, choose **Start** → **Programs** → **IBM WebSphere** → **Dashboard Framework** → **Online Documentation**

Chapter 4. Upgrading plug-in files, projects, and portlets

After installation, take additional steps to upgrade existing applications.

This section explains how to upgrade the product's plug-in files, existing projects, and portlets.

Upgrading plug-in files after installation

After upgrading WebSphere Dashboard Framework or WebSphere Portlet Factory into an existing Eclipse-based system, you must replace old Designer plug-in files with newer versions.

Follow these steps to update the Designer plug-in files:

1. Click**Start** → **Programs** → **IBM WebSphere** → **Portlet Factory** → **Designer**.
2. Choose **Help** → **Software Updates** → **Manage Configuration**.
3. In the left pane of the Project Configuration window, right-click the old installation and choose "Disable."
   This disables the old versions of the plug-in files.
4. Restart Portlet Factory Designer.
   The new plug-in files will be used.

Note: If you receive an error during project creation indicating that the system cannot find the file specified, start Eclipse using the -clean flag. This clears out persisting parameters that were set in Eclipse before you upgraded. See the Eclipse documentation for additional details about the -clean option.

Now upgrade existing projects to use new Designer components, as described in "Upgrading projects."

Upgrading projects

After you install and upgrade plug-ins, upgrade existing projects to use the new plug-in files.

Follow these steps to upgrade a project to incorporate the newest IBM WebSphere Portlet Factory plug-in files.

1. In Portlet Factory Designer, open the project to be upgraded.
2. Right-click the project in the Navigator and select **WebSphere Portlet Factory** → **Upgrade Project Version**.
3. When prompted, click **OK**.
   The project will be updated to use the latest components.
4. For the deployed applications to use the new versions of the files, you will need to cycle the server after you update the project.

Upgrading portlets to the Java Standard Portlet API

Upgrade portlets built using the deprecated IBM Portlet API to the new Java Standard Portlet API.

Starting with IBM WebSphere Portal 6, there is a new Java Standard Portlet API for portlets. While portlets designed for use in previous versions of WebSphere Portal, and built using the now deprecated IBM Portlet API, will continue to run in WebSphere Portal 6, it is recommended that any new portlets be built using the Java Standard Portlet API. The new standard allows developers to create portlets that work across multiple portal servers without requiring code changes.

Follow these steps to upgrade a portlet built in a previous version of Portlet Factory to use the new Java Standard API.

1. In Portlet Factory Designer, open the project containing the portlet model.
2. Right-click the project in the Navigator and choose **WebSphere Portlet Factory Project** → **Upgrade Project Version**.
3. Use the Auto-Deploy function to deploy the updated portlet WAR file to WebSphere Portal.
4. Use the WebSphere Administration tool to place the updated portlets on Portal pages.

Chapter 5. Removing IBM WebSphere Dashboard Framework

To remove the product, uninstall the product and remove project WAR files.

Follow these steps to remove IBM WebSphere Dashboard Framework files and project WAR files.

1. Use the Windows Control panel to access the Add/Remove Programs tool.
2. Select IBM WebSphere Dashboard Framework and click **Change/Remove**.
3. When the Uninstall screen appears, click **Uninstall**.

   Product files, registry entries and shortcuts are removed from your system.
4. Use your application and portal server administration tools to remove installable and installed WAR files.
5. If necessary, delete from the server's file system any remaining application- or portlet-related directories and files.

Appendix. Notices

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